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PATENT COOPERATION TREATY

From the
INTERNATIONAL PRELIMINARY EXAMINING

PCT

NOTIFICATION OF TRANSMITTAL OF
INTERNATIONAL PRELIMINARY
EXAMINATION REPORT

(PCT Rule 71.1)

To:

SHINSUNG PATENT FIRM

Haechon Bldg., 741-40, Yeoksam 1-dong, Kangnam-gu, Seoul
135-924, Republic of Korea

Date of mailing
(day/month/year) 30 JULY 2004 (30.07.2004)

Applicant's or agent's file reference
P02HA047/PCT

IMPORTANT NOTIFICATION

International application No.

PCT/KR2003/000722

International filing date (day/month/year)

10 APRIL 2003 (10.04.2003)

Priority date (day/months/year)

10 APRIL 2002 (10.04.2002)

Applicant

HYNIX SEMICONDUCTOR INC. et al.

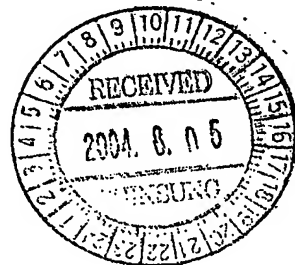
1. The applicant is hereby notified that International Preliminary Examining Authority transmits here with the international preliminary examination report and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.

4. REMINDER

The applicant must enter the national phase before each elected office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details in the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.



Name and mailing address of the IPEA/KR



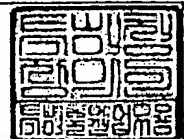
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COMMISSIONER

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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/KR2003/000722

I. Basis of the report

1. With regard to the elements of the international application:*

- ☒ the international application as originally filed
- ☐ the description:
pages _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____
- ☐ the claims:
pages _____, as originally filed
pages _____, as amended (together with any statement) under Article 19
pages _____, filed with the demand
pages _____, filed with the letter of _____
- ☐ the drawings:
pages _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____
- ☐ the sequence listing part of the description:
pages _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language _____ which is

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheet _____

5.

- ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed." and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item I and annexed to this report.

INTERNATIONAL PRELIMINARY EXAMINATION

International application No.

PCT/KR2003/000722

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**1. Statement**

Novelty (N)	Claims	1-28	YES
	Claims	NONE	NO
Inventive step (IS)	Claims	1-28	YES
	Claims	NONE	NO
Industrial applicability (IA)	Claims	1-28	YES
	Claims	NONE	NO

2. Citations and explanations (Rule 70.7)

Reference is made to the following documents:

D1 : US 6,320,779 B1

D2 : US 5,880,987 A

1. Novelty and Inventive Step

Claims 1-28 meet the criteria set out in PCT Article 33(2)-(3).

D1 discloses a die architecture for semiconductor memory devices configured to execute high speed applications, such as those performed in synchronous dynamic random access memory devices.

D2 relates to an architecture and package orientation for semiconductor memory devices, which results in an increase in the operating speed of the memory devices.

With regard to Claims 1, 24 and 27, neither D1 nor D2 teaches nor fairly suggests the invention's characteristic technique wherein a semiconductor memory chip comprises a plurality of memory banks which have a different number of unit memory blocks in a non-rectangular shape.

Therefore, novelty and an inventive step can be acknowledged for the subject matter of Claims 1, 24 and 27.

The other claims also comply with PCT Article 33(2) and (3) as they are dependent claims.

2. Industrial Applicability

Claims 1-28 meet the criteria set out in PCT Article 33(4). These claims are directed to a semiconductor memory chip architecture of memory banks, each having a plurality of memory blocks, and pads/control blocks and a method for arranging the memory blocks on the memory bank in a semiconductor memory device in a space effective manner.